



**Golden
Empire
Amateur
Radio
Society, Inc.**

"Dedicated to Public Service"

THE RADIATOR



W6RHC
IRLP #8170



www.gearsw6rhc.org P.O.Box 202 Chico, CA 95927

80 YEARS 1939 - 2019

November 2019 Newsletter

GEARS Founded August 13, 1939

News

Our new repeater on Mt. St. John is operational. W6RHC West is at 145.410 Mhz PL is 123.0 Negative offset. Michael Favor N6FAV wants to perform a few more adjustments before calling it good for the winter. This is a joint project between GEARS and GARS and was funded by a grant from the North Valley Community Foundation.

I would like to personally thank everyone who has helped out with this project, including but not limited to: Michael Favor N6FAV, Kathy Favor K6FAV, Bennett Laskey K6CEL, Michael A. Ellithorp KF6OBI, Philip Zabell KI6SMN, Dale Anderson KK6EVX, Douglas Poppelreiter KD6LOK, Bob Wirth KC6UIS, Tony Nasr N6VOT, Hank Spurlock KM6VFF, Lenus De Ruess and many others. This repeater will operate in addition to our current Forest Ranch repeater.

For the time being the GEARS Tuesday night net will continue to be held on the W6RHC Forest Ranch repeater at 146.850 Mhz.

We have made a couple changes to the GEARS dues. We want to be sure that membership is affordable for everyone. We now offer several tiers of member dues. New members, (including inactive GEARS members) can join for just \$10 for the first year. Next we offer a \$20 membership. Of course GEARS needs support for our many expenses including rent, utilities, insurance, VEC and ARES. So the standard membership is now called "Supporting Member" which is \$30. If you are able to give us more support, there is also the Century Membership for \$100. Century members will be thanked in the newsletter (unless you request not to be.)

'73
Jim Matthews K6EST
jiminchico@yahoo.com
530-893-3314



Join GEARS on Facebook
www.facebook.com For timely
news and additional information.



November 2019 Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3 8pm OARS Net	4 7pm GARS Net 8pm ARES Net	5 7:30pm GEARS Net	6	7 7pm PARS Net 6:30 GARS Meeting 7:30pm Simplex Net	8 7pm OARS Meeting	9 9am Chico Breakfast GEARS Board Meeting
10 8pm OARS Net	11 7pm GARS Net 8pm ARES Net	12 7:30pm GEARS Net	13	14 7pm PARS Net 7:30pm Simplex Net	15 7pm GEARS Meeting	16
17 8pm OARS Net	18 7pm GARS Net 8pm ARES Net	19 7:30pm GEARS Net	20	21 7pm PARS Net 7:30pm Simplex Net	22	23
24 8pm OARS Net	25 7pm GARS Net 8pm ARES Net	26 7:30pm GEARS Net	27	28 7pm PARS Net 7:30pm Simplex Net	29	30 9am OARS Breakfast

VEC Testing, FCC License Exam First Sunday of every even numbered month, at the Butte County Search and Rescue Building. Written test at 2:00 pm. For information or registration call Tom Rider, W6JS 514-9211

Chico Breakfast 2nd Saturday of the month 9 am Farmers Skillet 1818, 690 Rio Lindo Ave, Chico

GEARS Board Meeting 2nd Saturday of the month at Vitalant (formerly Bloodsource) following the breakfast.

OARS Meeting Second Friday of the month, 7:00 pm, at St. Paul's Church Parish Hall, 1430 Pine St., Oroville

GARS Meeting Second Thursday of the month, 6:30 pm Lutheran Church Hall, 565 Main St. Artois.

Butte ARES Meeting 3rd Tuesday, Except Nov & Dec. at Chico Veterans Hall 7pm. Contact Dale Anderson, KK6EVX 826-3461 for more information.

GEARS Meeting, third Friday of the month, Butte County Search and Rescue Bldg., Chico. Social hour 6:00 pm, meeting at 7:00 pm.

OARS Breakfast 4th Saturday of the month 9am Gold Country Casino & Hotel, 4020 Olive Hwy, Oroville

NETS:

OARS Club Net Sunday 8pm 146.655 Mhz - PL 136.5

GARS Club Net: Monday, 7:00 pm 147.105 MHz + PL 110.09

Butte ARES Net Mondays 8pm 145.290 MHz - PL 110.9

Yuba Sutter Club Net Monday 7pm 146.085 MHz + PL 127.3

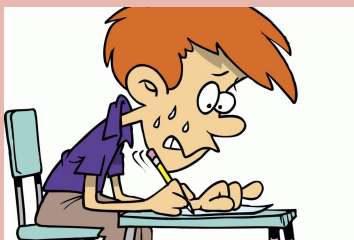
GEARS Club Net Tuesdays 7:30 PM 146.850 MHz - PL 110.9

PARS Club Net Thursday 7pm 145.290 - PL 110.9

Simplex Net Thursday 7:30 p.m. 146.52 no tone

Yuba Sutter ARES Net Thursdays 7pm 146.085 MHz + PL 127.3

Sacramento Valley Traffic Net Nightly 9:00 PM 146.850 MHz - PL 110.9



Ham Cram Prep Course

Rick Hubbard is putting together a Ham Cram prep class for anyone who needs to prepare for the Technician Class test. Saturday February 1st, 2020, the day prior to the scheduled February VEC Testing. Let him know if you have anyone who might be interested. Time and location to be announced.

For information contact Rick rick.hubbard.email@gmail.com

Chatham Marconi Maritime Center

By Terence, Hall, K6MA

If your travels take you near Cape Cod, visit Chatham for a dose of radio history.

The year is 1914 and Guglielmo Marconi has just built his third of a five circuit wireless network connecting America with Japan and Europe at Ryder's Cove in Chatham, Cape Cod, Massachusetts. Just imagine being transported back to this exciting time over 100 years ago when Marconi was still building his reputation as a pioneer of wireless telegraphy.



To experience some of this excitement visit the new [Chatham Marconi Maritime Center](#) (CMMC) in Chatham, Massachusetts. The museum is housed in the original buildings built for Marconi and serve as the showplace for many of the authentic devices and antennas from that era. Feel the thrill of being on the cutting edge of this new science, experimenting with new antennas and pushing the fledgling electronics technology to its limit.

Outside, the original antenna field, now covering 13 acres (out of the original 18-19 acres), is still very visible and is being adapted to Amateur Radio. The site of the museum, still with all of the original brick buildings, is the actual site on which Marconi built one of his radio communication centers.

From the early stages of planning this museum, 8 years ago, the inclusion of an Amateur Radio "shack" was discussed enthusiastically as a necessary ingredient. As a result, the museum incorporates a dedicated room serving as a "ham shack" for the local ham radio club. Efforts are underway to modify the original antenna designs to work on the amateur bands in addition to installing donated modern antennas. The call sign for the museum ham club is: WA1WCC. It is licensed to the Chatham WCC Radio Club. In addition to putting in lots of volunteer work, all of the modern equipment in the shack was donated by hams.

Many people, including local hams, volunteered countless hours to renovate the buildings and equipment that are on display. Some of the equipment inside the museum includes: a direction finding antenna, a ship radio, an HRO Navy radio (with plug in coils), a diorama of the site, a remote transmitting station control panel, a radioteletype operating station, a Morse code exhibit and, of course, some vintage and modern Amateur Radio equipment.

The official preview opening date was August 1, 2010. I was there the week prior on vacation and through the generosity of the museum personnel (Vice President Frank Messina and Communications Chair Roz Coleman) I was able to "sneak" in on the afternoon of Friday July 30 while they were still preparing for the opening. Rob Leiden, K1UI (a museum director) graciously spent considerable time with me as my host and guide both inside the museum and walking the antenna field. I wish to thank Rob for his time and knowledge as he was under great pressure to get everything ready for the opening.

Elbow in the Sea

The town of Chatham is on the "elbow" of Cape Cod and thus has ocean on three sides, making it a perfect place to communicate to ships at sea. In 1914, Marconi constructed the now famous campus on Ryder's Cove (site of the museum) in Chatham as Circuit 3 of a five circuit wireless network to communicate with the towns of Naerboe and Stavanger in Norway. Chatham was the controlling location where a highly sensitive receiving station was built and from here the 300,000 W spark transmitter 32 miles to the west in Marion was remotely operated.



The site was called the Marconi Station, call sign: WCC. (Note: currently WCC is assigned to a Maryland station, owned by Globe Wireless, to transmit automated e-mail-by-radio.) Each ship would listen on a prearranged frequency for their call sign and then switch to another prearranged frequency to receive their Morse code traffic.

During World War II Chatham WCC was an important link in the intelligence chain and Chatham Navy Radio Commander John McKnight said: "You may never know the outcome of your work, however it is really working and the U-boats are disappearing fast."

Maritime wireless communication flourished here at Chatham Radio WCC, one of the 20th century's premier wireless telegraphy stations from 1920-1993. Worldwide wireless communication operated 24/7 during those years, except for one period.

In 1938 there was a severe hurricane. Storm damage prevented telephone communication between the Marconi site and RCA in New York City. The Amateur Radio operators working within the National Traffic System stepped in and relayed message traffic to and from RCA headquarters for several weeks until telephone communications were restored. If it were not for the hams there would have been no communication possible to the ships at sea.

Station History

In 1914, Marconi sought a more permanent solution to his weather-induced radio station woes on Cape Cod. The Wellfleet location (some 24 miles to the North on Cape Cod), built in 1903, was too close to shore and was continuously pounded by passing storms causing tremendous damage. The erosion and wind damage suffered by Marconi's first Cape Cod station continues to this day. Almost the entire structure of the historic station is now long gone over the cliffs onto the beach and into the waters of the Atlantic below.

Marconi realized that a commercial operation required a location that was farther inland and somewhat sheltered. So it was that the Marconi Wireless Telegraph Company of America built a new receiver station in Chatham in 1914 and its companion transmitter site 32 miles to the west in Marion, Massachusetts. In 1948 the transmitter site was moved to Forest Road Beach in South Chatham, Massachusetts, where the tower bases can still be seen.

In November 1919, the Marconi Wireless Telegraph Company of America sold all its patents to the newly created Radio Corporation of America (a consortium of GE, Westinghouse and United Fruit) at the request of the US Navy.

RCA, after acquiring this station from the Marconi Corporation, initiated operation as a point-to-point station communicating with Norway but soon recommissioned the station as a more lucrative commercial ship-to-shore station. It eventually became the busiest ship-to-shore station in this hemisphere, and possibly worldwide, as it was sufficiently sensitive to hear ship messages from around the world.

In 1917, it was occupied by the US Navy to be used as an experimental antenna testing location and also as a backup to the Belmar New Jersey listening station. Unfortunately, just a mile to the east, the WWI Chatham Naval Air Station was operating, communicating with the patrolling blimps and seaplanes, and was generating signals that interfered with the Chatham WCC listening station. Originally the transmitter for WCC was in Marion to prevent interference but in 1948 it was moved to Forest Beach in South Chatham.

In 1988, RCA sold WCC to MCI Communications as part of the breakup of RCA. In March 1993, WCC became a remotely controlled station using fiber optic cable to receive and transmit signals, and issue commands such as rotating WCC's directional antennas. Even the keying of Morse code (CW) and Radioteletype (RTTY) was issued remotely. WCC was operated from KPH Radio in Point Reyes, California until its closing later that year.

Chatham's Antennas

None of the original six-mast, 1 mile long, 400 foot high antenna remains. Built in 1914, five of the masts were removed in 1919 and the final mast in 1956.

The Navy built a pair of orthogonal goniometer coupled loop antennas [a device for determining the bearing to a radio signal source. — Ed.] during WWI. At the time these were state-of-the-art and remained in use until the early 1930s.

One of the first commercial applications of the Bell Laboratories huge rhombic antennas was made at WCC in 1930 as the parent company of Bell Labs, AT&T, was a major owner of RCA, which now owned the station. The largest rhombic, built by

the Navy, was designed to listen to transmissions from Berlin.

There were six rhombic antennas of various sizes for most of the HF spectrum constructed on the site; all of them were quite large. There is a model of the original site inside the museum that illustrates the scale of the antennas relative to the original buildings that still exist.

The antenna field is huge covering 13 acres with many towers and poles spread about. Two of the antennas were originally at 9.8 and 21 MHz. Both these were close enough to the amateur bands (30 and 15 meters) to be used by the radio club but may be too far away from the radio room to be restored as operating antennas. During my visit Rob, K1UI, had just completed the hookups to a 40 meter dipole and made a test run, pumping out 2 kW. He worked a station briefly but something was not quite right with his transmission so troubleshooting began. (Turns out 2 kW and RG-8X just don't mix!) At this point, I thought it best to leave so that Rob could figure out what the anomaly was without my interference.

I took many photographs and plan on visiting there each time we go the Cape as my wife and I own a second home in Chatham. So at least a couple of visits a year will be made for updates and offers of some of my time to volunteer with the work needed to complete and maintain the ham radio facility there.

The station was the subject of the Mooncusser Films documentary [Chatham Radio: WCC the Untold Story](#), narrated by the late Walter Cronkite, KB2GS (SK), and directed by Christopher Seufert; CMMC visitors may view portions of the film.

Historic Contacts

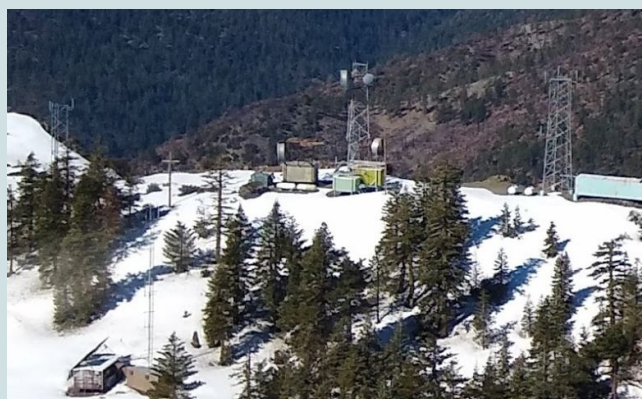
- 1928 — communication with Richard E. Byrd's first South Pole expedition
- 1929 — communication with the Graf Zeppelin during the first around-the-world trip by air
- 1933 — sends weather information to Charles Lindbergh
- 1937 — possible last communication with the Hindenburg prior to explosion
- 1961 — communication with Santa Maria (call sign CSAL) during hijacking

Terry (Terence) Hall, K6MA, an ARRL® member, is originally from Cheshire, England. He graduated with a degree in Electrical Engineering in 1964 and immigrated to the US in 1966 at the age of 23. Terry cofounded an engineering company in 1969 and codesigned the Mk 75 antisubmarine warfare system. He had an active electronics consulting business in addition to working full time at Hughes Aircraft Company. His final 28 years in the aerospace industry were at Northrop Grumman Corporation in El Segundo, California in various management positions.

Terry retired in 2008 and, missing the electronics design process, eventually "discovered" that ham radio can be very technical. For Terry 2010 was a big year. He obtained his Technician class license in April, General class in June (on Field Day) and his Extra class license in October. He has topped it all off by becoming a Volunteer Examiner. Terry can be reached at 16642 Calle Arbolada, Pacific Palisades, CA, 90272-1924, k6ma@arrl.net.

GEARS / GARS New Repeater IS ON THE AIR

W6RHC West is 145.410 Mhz
PL is 123.0 Negative offset.



Club Officers:

President.....Jim Matthews, K6EST
Vice-President.....Kent Hastings, WA6ZFY
Secretary.....Stephan Lonis, KM6RSO
Treasurer.....Kathy Favor, K6FAV
Director.....Rick Hubbard, KI6VOS
Director..... Dale Anderson, KK6EVX
Past President.....Tom Rider, W6JS
VEC.....Tom Rider, W6JS

DO YOU HAVE OLD QST MAGAZINES IN SEARCH OF A NEW HOME?

Gene Wright has that future home for your QST's, through his project to place QST Magazines in professional offices throughout Chico. Labels placed on the QST's will advertise the Golden Empire Amateur Radio Society, encourages the readers to consider Ham Radio as an interesting hobby, one of not only fun, but which provides opportunities for many and various community services.

Bring your QST's to Gene at the Club meetings or contact: Gene WA6ZRT 530-519-2519



"CQ. CQ. CQ. CQ. CQ, WA4YKK. CQ. CQ, CQ, CQ. CQ, CQ, CQ, CQ, CQ"

Popular Electronics 1966



"And then she threw all my QSL cards into the fire."

Popular Electronics 1966



"Move, Cathy. I'm taking a picture for my QSL card."

Popular Electronics 1966